



Letting the Brain Speak for itself

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Metaphors of Computation and Information tended to detract attention from the intrinsic modes of neural system functions, uncontaminated by the observer's role for collection and interpretation of experimental data. Recognizing the self-referential mode of function, and the propensity for self-organization to critical states requires a fundamental re-orientation with emphasis on the conceptual approaches of Complex System Dynamics. Accordingly, local cooperative processes, intrinsic to neural structures and of fractal nature, call for applying Fractional Calculus and models of Random Walks in Theoretical Neuroscience studies.

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